Appl. No. 09/774,832 Amdt. dated July 21, 2004 Reply to Office action of April 21, 2004

## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

## **Listing of Claims:**

- 1. (original) A apparatus for reducing output energy and bandwidth of an intermittent data stream through a digital filter, comprising:
  - a digital filter, and
- a controller coupled to said digital filter and operable to calculate at least a first ramp data field in accordance with coefficients selected to minimize energy in a truncated tail of the digital filter as a function of at least a first data field.
- 2. (original) The apparatus of claim 1, and wherein said at least a first data field is adjacent to said ramp data field.
- 3. (original) The apparatus of claim 1, and wherein said controller is further operable to window said ramp data field.
- 4. (currently amended) The apparatus of claim 1, and wherein said controller is further operable to calculate both of a ramp-up and a ramp-down ramp data field as a function of said at least a first data field and a second data field respectively, and wherein ramp-down coefficients are the mirror image of said coefficients selected to minimize energy.



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5. (original) An apparatus for generating coefficients to reduce the output energy and bandwidth of an intermittent signal in a digital filter, comprising:

a controller operable to calculate the energy in at least a first truncated tail data field as a function of at least a first ramp data field and at least a first data field, and operable to take a partial derivative of the energy in said at least a first truncated tail data field with respect to said at least a first ramp data field, and operable to generate an equality by setting said partial derivative equal to zero, and operable to solve said equality for said at least a first ramp data field as a function of said at least a first data field thereby generating at least a first coefficient.

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6. (currently amended) The apparatus of claim 5, and wherein said energy in said at least a first truncated tail data field is also a function of the digital filter tap coefficients.

7. (original) A method of reducing output energy and bandwidth of an intermittent data stream through a digital filter, comprising the step of:

calculating at least a first ramp data field in accordance with coefficients selected to minimize energy in a truncated tail of the digital filter as a function of at least a first data field.

- 8. (original) The method of claim 7, and wherein said at least a first data field is adjacent to said ramp data field.
- 9. (original) The method of claim 7, further comprising the step of windowing said ramp data field.
- 10. (original) The method of claim 7, and wherein said calculating step is applied to both of a ramp-up and a ramp-down ramp data field as a function of said at least a first data field and a second data field respectively, and wherein ramp-down coefficients are the mirror image of said coefficients.

11. (original) A method generating coefficients for reducing the output energy and bandwidth of an intermittent signal in a digital filter, comprising the steps of:

calculating the energy in at least a first truncated tail data field as a function of at least a first ramp data field variable and at least a first data field variable;

taking a partial derivative of the energy in said at least a first truncated tail data field with respect to said at least a first ramp data field variable;

writing an equality by setting said partial derivative equal to zero, and solving said equality for said at least a first ramp data field variable as a function of said at least a first data field thereby generating at least a first coefficient.

12. (currently amended) The method of claim 11, and wherein said energy in said at least a first truncated tail data field is also a function of the digital filter tap coefficients.

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